PYTHON LAB EXERCISE 1

1.Given the sides of a triangle, check whether triangle is equilateral, scalene or isosceles or not

Rules:

Isosceles triangle: A triangle that has two sides of equal length.

Equilateral triangle: A triangle in which all three sides are equal.

Scalene triangle: A triangle that has three unequal sides.

1.py - E:\125003344\1.py (3.10.1)

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```
a=int(input("ENTER VALUE OF A : "))
b=int(input("ENTER VALUE OF B: "))
c=int(input("ENTER THE VALUE OF C : "))
if(a==b==c):
    print("THE TRIANGLE IS EQUILATERAL TRIANGLE")
elif(a!=b!=c):
    print("THE TRIANGLE IS SCALENE TRIANGLE")
else:
    print("THE TRIANGLE IS ISOCLESES TRIANGLE")
```

OUTPUT :

```
Python 3.10.1 (tags/v3.10.1:2cd268a, Dec  6 2021, 19:10:37) [MSC v.1929 64 bit (
AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
========== RESTART: E:\125003344\1.py ==========
ENTER VALUE OF A : 100
ENTER VALUE OF B: 20
ENTER THE VALUE OF C : 30
THE TRIANGLE IS SCALENE TRIANGLE
>>>
```

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2.Given the three angles, check whether it forms a triangle or not.

Rule: None of angles should be zero and the sum of the angles should be 180.

```
a=int(input("ENTER THE VALUE OF ANGLE A : "))
b=int(input("ENTER THE VALUE OF ANGLE B : "))
c=int(input("ENTER THE VALUE OF ANGLE C : "))
if(a<0,b<0,c<0):
    print("THE ANGLES DO NOT FORM TRIANGLE")

if(a+b+c==180):
    print("THE ANGLES FORM TRIANGLE")
else:
    print("THE ANGLES DO NOT FORM TRIANGLE")
```

OUTPUT :

```
Python 3.10.1 (tags/v3.10.1:2cd268a, Dec  6 2021, 19:10:37) [MSC v.1929 64 bit (
AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
========== RESTART: E:\125003344\2.py ==========
ENTER THE VALUE OF ANGLE A : 100
ENTER THE VALUE OF ANGLE B : 10
ENTER THE VALUE OF ANGLE C : 15
THE ANGLES DO NOT FORM TRIANGLE
```

PYTHON LAB EXERCISE 1

3.Check whether a given date is valid or not.

```
date=int(input("ENTER THE DATE : "))
month=int(input("ENTER THE MONTH : "))
year=int(input("ENTER THE YEAR : "))
if(date>0 and date<32)& (month<=12):
    print("THE DATE IS VALID")
else:
    print("THE DATE IS INVALID")
```

OUTPUT:

```
Python 3.10.1 (tags/v3.10.1:2cd268a, Dec  6 2021, 19:10:37) [MSC v.1929 64 bit (
AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
========================== RESTART: E:\125003344\3.py ==========================
ENTER THE DATE : 10
ENTER THE MONTH : 25
ENTER THE YEAR : 2023
THE DATE IS INVALID
>>>
```

4.Get an input from the user and find the number is positive or negative or zero

```
num=int(input("ENTER A INTEGER : "))
if(num<0):
    print("THE INTEGER IS NEGATIVE ")
elif(num==0):
    print("THE INTEGER IS ZERO")
else:
    print("THE NUMBER IS POSITIVE")
```

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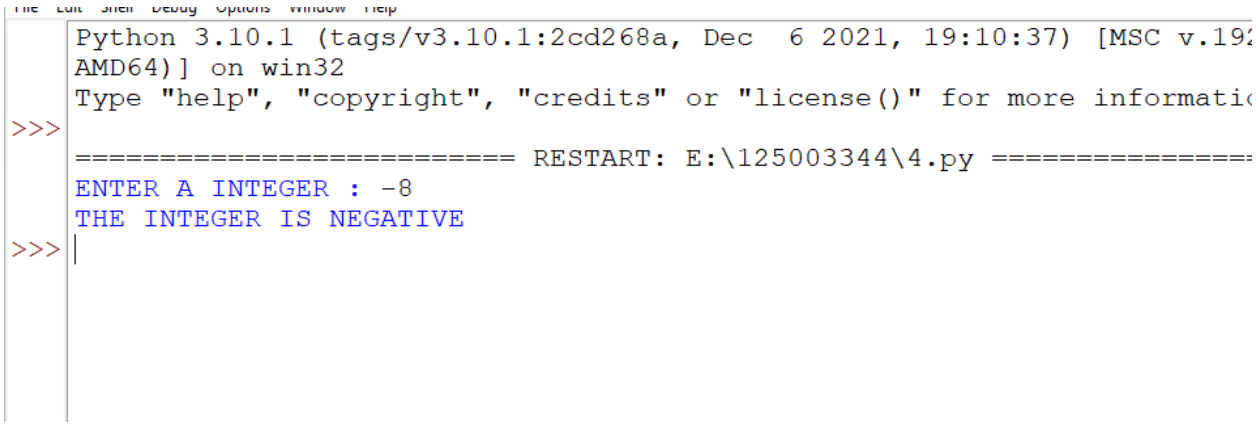
OUTPUT:



5.Write a program to input marks in English, Maths and Science of a student Now perform the following tasks:

a) Find the average Mark

b) if any subject mark is greater than 90 print the mark and the subject name

```
en=int(input("ENTER THE MARKS IN ENGLISH: "))
mat=int(input("ENTER THE MARKS IN MATHS :"))
sci=int(input("ENTER THE MARKS IN SCIENCE :"))
avg=(en+mat+sci)/3
print(avg)
if(en>89):
    print(en)
elif(mat>89):
    print(mat)
elif(sci>89):
    print(sci)
```

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OUTPUT:

```
Python 3.10.1 (tags/v3.10.1:2cd268a, Dec  6 2021, 19:10:37) [MSC v.1929 64 bit (
AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
========================== RESTART: E:\125003344\5.py ==========================
ENTER THE MARKS IN ENGLISH: 100
ENTER THE MARKS IN MATHS :26
ENTER THE MARKS IN SCIENCE :32
52.666666666666664
100
>>>
```